



DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA-2019-0009]

RIN 2127-AM10

Federal Motor Vehicle Safety Standards;

Electric-Powered Vehicles: Electrolyte Spillage and Electrical Shock Protection

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: This final rule clarifies the direct contact protection requirements for high voltage connectors in Federal Motor Vehicle Safety Standard (FMVSS) No. 305, “Electric-powered vehicles: electrolyte spillage and electrical shock protection.” It amends the standard to make clear the allowance of high voltage connectors that require the use of a tool to separate from their mating component. This final rule also makes three minor technical corrections to FMVSS No. 305.

DATES: Effective date: This final rule is effective [INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Compliance date: The compliance date for the amendments in this final rule is [INSERT DATE 1 YEAR AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Optional early compliance is permitted.

Petitions for reconsideration: Petitions for reconsideration of this final rule must be received not later than [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Petitions for reconsideration of this final rule must refer to the docket and notice number set forth above and be submitted to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590. Note that all petitions received will be posted without change to <http://www.regulations.gov>, including any personal information provided.

Privacy Act: Please see the Privacy Act heading under Rulemaking Analyses and Notices.

FOR FURTHER INFORMATION CONTACT: You may contact Ms. Shashi Kuppa, Office of Crashworthiness Standards; telephone: 202-366-3827; facsimile: 202-493-2990, or Mr. Daniel Koblenz, Office of Chief Counsel; telephone: 202-366-2992; facsimile: 202-366-3820. The mailing address of these officials is: National Highway Traffic Safety Administration, 1200 New Jersey Avenue, S.E., Washington, D.C. 20590.

SUPPLEMENTARY INFORMATION:

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- I. Introduction**

On February 28, 2019, NHTSA published a notice of proposed rulemaking (NPRM) proposing to amend Federal Motor Vehicle Safety Standard (FMVSS) No. 305, “Electric-powered vehicles: electrolyte spillage and electrical shock protection.” 84 FR 6758. The NPRM proposed to amend the regulatory text of FMVSS No. 305 to explicitly permit high-voltage connectors that provide direct contact protection when connected to their mating component and that require the use of a tool to separate from their mating component. The regulatory text that was the subject of the NPRM was adopted in a September 27, 2017 final rule (82 FR 44945) that sought to harmonize FMVSS No. 305 with Global Technical Regulations (GTRs) No. 13, “Hydrogen and Fuel Cell Vehicles,” and No. 20, “Electric Vehicle Safety.” The purpose of the February 2019 NPRM was to clarify certain wording of that final rule relating to high-voltage connectors. The agency explained that the proposed changes would not negatively affect motor vehicle safety. NHTSA also proposed three minor technical corrections to the standard. NHTSA’s reasoning and justification for the proposed changes were fully explained in the NPRM.

NHTSA provided an abbreviated 15-day comment period for the NPRM because the proposed changes were merely corrective and clarifying in nature, and because the changes would provide manufacturers with additional flexibility to meet the requirements of NHTSA’s September 27, 2017 final rule amending FMVSS No. 305.

II. Alliance Comment to the NPRM

NHTSA received just one comment on the NPRM, which was submitted by the Alliance of Automobile Manufacturers (Alliance) in support of the proposed change.¹ The Alliance stated that it supported the proposed rule because the rule would clarify the direct contact protection

¹ According to its website, the Alliance is an advocacy group that represents automakers who build 70% of all cars and light trucks sold in the U.S. (see <https://autoalliance.org/>)

requirements that apply to high voltage connectors, would explicitly permit the use of high voltage connectors that cannot be separated from their mating component without the use of tools, and would harmonize FMVSS No. 305 with GTRs No. 13 and No. 20.²

III. Final Rule

After consideration of the comment submitted by the Alliance and all other pertinent matters, NHTSA adopts the amendments proposed in the NPRM for the reasons stated in the NPRM.

IV. Regulatory notices and analyses

Executive Order 12866 and DOT Order 2100.6

We have considered the potential impact of this final rule under Executive Order (E.O.) 12866, and DOT Order 2100.6 and have determined that it is nonsignificant. This rulemaking document was not reviewed by the Office of Management and Budget (OMB) under E.O. 12866. The changes in this final rule largely clarify or correct text adopted by a September 27, 2017 final rule and will have no significant effect on the national economy. This final rule clarifies the direct contact protection requirements that apply to high voltage connectors, and explicitly permits the use of high voltage connectors that cannot be separated from their mating component without the use of tools.

Executive Order 13771

E.O. 13771, “Reducing Regulation and Controlling Regulatory Costs,” directs that, unless prohibited by law, whenever an executive department or agency publicly proposes for notice and comment or otherwise promulgates a new regulation, it shall identify at least two existing regulations to be repealed. In addition, any new incremental costs associated with new

² The Alliance further requested that NHTSA host a public compliance workshop to assist industry stakeholders with understanding and complying with the September 27, 2017 final rule.

regulations shall, to the extent permitted by law, be offset by the elimination of existing costs. Per OMB Memorandum M-17-21, only those rules deemed significant under section 3(f) of E.O. 12866 are considered E.O. 13771 regulatory actions. This final rule is not significant under EO 12866, and is therefore not considered an E.O. 13771 regulatory action.

Regulatory Flexibility Act

NHTSA has considered the effects of this final rule under the Regulatory Flexibility Act (5 U.S.C. 601 et seq., as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996). I certify that this final rule will not have a significant economic impact on a substantial number of small entities. Any small manufacturers that might be affected by this final rule are already subject to the requirements of FMVSS No. 305. This final rule merely clarifies or corrects text adopted by the September 27, 2017 final rule. This rulemaking action does not impose any additional restrictions that will affect small entities, and in fact, will give greater design flexibility to manufacturers of electric vehicles.

National Environmental Policy Act

NHTSA has analyzed this rulemaking action for the purposes of the National Environmental Policy Act. The agency has determined that implementation of this action will not have any significant impact on the quality of the human environment.

Executive Order 13132 (Federalism)

NHTSA has examined today's final rule pursuant to Executive Order 13132 (64 FR 43255; Aug. 10, 1999) and concluded that no additional consultation with States, local governments, or their representatives is mandated beyond the rulemaking process. The agency has concluded that the final rule does not have sufficient federalism implications to warrant consultation with State and local officials or the preparation of a federalism summary impact

statement. The final rule does not have “substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.”

NHTSA rules can have preemptive effect in two ways. First, the National Traffic and Motor Vehicle Safety Act contains an express preemption provision, stating that when a motor vehicle safety standard is in effect under this chapter, a State or a political subdivision of a State may prescribe or continue in effect a standard applicable to the same aspect of performance of a motor vehicle or motor vehicle equipment only if the standard is identical to the standard prescribed under this chapter. 49 U.S.C. 30103(b)(1). It is this statutory command that preempts any non-identical State legislative and administrative law addressing the same aspect of performance.

The express preemption provision described above is subject to a savings clause under which “[c]ompliance with a motor vehicle safety standard prescribed under this chapter does not exempt a person from liability at common law.” 49 U.S.C. § 30103(e). Pursuant to this provision, State common law tort causes of action against motor vehicle manufacturers that might otherwise be preempted by the express preemption provision are generally preserved. However, the Supreme Court has recognized the possibility, in some instances, of implied preemption of State common law tort causes of action by virtue of NHTSA’s rules—even if not expressly preempted.

This second way that NHTSA rules can preempt is dependent upon the existence of an actual conflict between an FMVSS and the higher standard that would effectively be imposed on motor vehicle manufacturers if someone obtained a State common law tort judgment against the manufacturer—notwithstanding the manufacturer’s compliance with the NHTSA

standard. Because most NHTSA standards established by an FMVSS are minimum standards, a State common law tort cause of action that seeks to impose a higher standard on motor vehicle manufacturers will generally not be preempted. However, if and when such a conflict does exist—for example, when the standard at issue is both a minimum and a maximum standard—the State common law tort cause of action is impliedly preempted. *See Geier v. American Honda Motor Co.*, 529 U.S. 861 (2000).

Pursuant to E.O. 13132, NHTSA has considered whether this final rule preempts State common law causes of action. The agency’s ability to announce its conclusion regarding the preemptive effect of one of its rules reduces the likelihood that preemption will be an issue in any subsequent tort litigation.

To this end, the agency has examined the nature (e.g., the language and structure of the regulatory text) and objectives of today’s final rule and finds that this rule, like many NHTSA rules, prescribes only a minimum safety standard. Accordingly, NHTSA does not intend that this final rule preempt state tort law that effectively imposes a higher standard on motor vehicle manufacturers than that established by today’s final rule. Establishment of a higher standard by means of State tort law would not conflict with the minimum standard established by this document. Without any conflict, there could not be any implied preemption of a State common law tort cause of action.

Executive Order 12988 (Civil Justice Reform)

With respect to the review of the promulgation of a new regulation, section 3(b) of Executive Order 12988, “Civil Justice Reform” (61 FR 4729; Feb. 7, 1996), requires that Executive agencies make every reasonable effort to ensure that the regulation: (1) clearly specifies the preemptive effect; (2) clearly specifies the effect on existing Federal law or

regulation; (3) provides a clear legal standard for affected conduct, while promoting simplification and burden reduction; (4) clearly specifies the retroactive effect, if any; (5) specifies whether administrative proceedings are to be required before parties file suit in court; (6) adequately defines key terms; and (7) addresses other important issues affecting clarity and general draftsmanship under any guidelines issued by the Attorney General. This document is consistent with that requirement.

Pursuant to this Order, NHTSA notes as follows. The issue of preemption is discussed above. NHTSA notes further that there is no requirement that individuals submit a petition for reconsideration or pursue other administrative proceedings before they may file suit in court.

Privacy Act

Please note that anyone can search the electronic form of all documents received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (65 FR 19477-78), or online at <http://www.dot.gov/privacy.html>.

Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995 (PRA), a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number. There are no information collection requirements associated with this final rule.

National Technology Transfer and Advancement Act

Under the National Technology Transfer and Advancement Act of 1995 (NTTAA) (Public Law 104-113), "all Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical

standards as a means to carry out policy objectives or activities determined by the agencies and departments.” Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies, such as the Society of Automotive Engineers (SAE). The NTTAA directs us to provide Congress, through OMB, explanations when we decide not to use available and applicable voluntary consensus standards.

Pursuant to the above requirements, the agency conducted a review of voluntary consensus standards to determine if any were applicable to this final rule. NHTSA searched for but did not find voluntary consensus standards directly applicable to the amendments in this final rule.

However, consistent with the NTTAA, this final rule is aligned with regulations developed globally on electric vehicle safety, namely GTR No. 13 and GTR No. 20.³ The GTRs permit the use of high voltage connectors that cannot be separated from their mating component without the use of tools. We believe that the amendments to FMVSS No. 305 would promote harmonization of our countries’ regulatory approaches on electric vehicles and HFCVs.

Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of more than \$100 million annually (adjusted for inflation with base year of 1995). We note that as this final rule only makes minor adjustments and

³ The NTTAA seeks to support efforts by the Federal government to ensure that agencies work with their regulatory counterparts in other countries to address common safety issues. Circular No. A-119, “Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities,” January 27, 2016, p. 15.

clarifications to FMVSS No. 305, it will not result in expenditures by any of the aforementioned entities of over \$100 million annually.

Executive Order 13609 (Promoting Regulatory Cooperation)

Executive Order 13609 states that the regulatory approaches taken by foreign governments may differ from those taken by U.S. regulatory agencies to address similar issues. In some cases, the differences between the regulatory approaches of U.S. agencies and those of their foreign counterparts might not be necessary and might impair the ability of American businesses to export and compete internationally. In meeting shared challenges involving health, safety, labor, security, environmental, and other issues, international regulatory cooperation can identify approaches that are at least as protective as those that are or would be adopted in the absence of such cooperation. International regulatory cooperation can also reduce, eliminate, or prevent unnecessary differences in regulatory requirements.

This final rule harmonizes FMVSS No. 305 with provisions that are in GTRs No. 13 and No. 20. Specifically, the primary clarification made by this document—that the use of connectors that cannot be separated from their mating component without the use of tools is permissible under FMVSS No. 305—brings FMVSS No. 305 into alignment with GTRs No. 13 and No. 20 requirements relating to high voltage connectors, and so will further the goals of E.O. 13609.

Regulation Identifier Number

The Department of Transportation assigns a regulation identifier number (RIN) to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year.

You may use the RIN contained in the heading at the beginning of this document to find this action in the Unified Agenda.

List of Subjects in 49 CFR Part 571

Imports, Motor vehicles, Motor vehicle safety.

In consideration of the foregoing, NHTSA amends 49 CFR part 571 as follows:

PART 571—FEDERAL MOTOR VEHICLE SAFETY STANDARDS

1. The authority citation for part 571 continues to read as follows:

Authority: 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.95 and 501.8.

2. Amend § 571.305 by

- a. Adding (in alphabetical order) a definition for “High voltage live part” to S4;
- b. Revising S5.4.1.5;
- c. Revising the introductory text of S8; and,
- d. Revising S9.2(a).

The addition and revisions read as follows:

§571.305 Standard No. 305; Electric-powered vehicles; electrolyte spillage and electrical shock protection.

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S4. Definitions.

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High voltage live part means a live part of a high voltage source.

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S5.4.1.5 *Connectors*. All connectors shall provide direct contact protection by:

(a) Meeting the requirements specified in S5.4.1.4 when the connector is connected to its corresponding mating component; and,

(b) If a connector can be separated from its mating component without the use of a tool, meeting at least one of the following conditions from (b)(1), (2), or (3) of this section:

(1) The connector meets the requirements of S5.4.1.4 when separated from its mating component;

(2) The voltage of the live parts becomes less than or equal to 60 VDC or 30 VAC within one second after the connector is separated from its mating component; or,

(3) The connector requires at least two distinct actions to separate from its mating component and there are other components that must be removed in order to separate the connector from its mating component and these other components cannot be removed without the use of tools.

* * * * *

S8. *Test procedure for on-board electrical isolation monitoring system.* Prior to any impact test, the requirements of S5.4.4 for the on-board electrical isolation monitoring system shall be tested using the following procedure.

* * * * *

S9.2 * * *

(a) *Test method using a resistance tester.* The resistance tester is connected to the measuring points (the electrical chassis and any exposed conductive part of electrical protection barriers or any two simultaneously reachable exposed conductive parts of electrical protection barriers that are less than 2.5 meters from each other), and the resistance is measured using a resistance tester that can supply current levels of at least 0.2 Amperes with a resolution of 0.01

ohms or less. The resistance between two exposed conductive parts of electrical protection barriers that are less than 2.5 meters from each other may be calculated using the separately measured resistances of the relevant parts of the electric path.

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Issued in Washington, D.C., under authority delegated in 49 CFR 1.95 and 501.5.

Heidi Renate King,
Deputy Administrator.

Billing Code 4910-59-P

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